

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

UNITED STATES OF AMERICA

v.

HYTERA COMMUNICATIONS
CORPORATION, LTD.

No. 20 CR 688-1

Judge John J. Tharp Jr.

GOVERNMENT'S SENTENCING MEMORANDUM

ANDREW S. BOUTROS
United States Attorney

By: /s/ Melody Wells
MELODY WELLS
THOMAS P. PEABODY
WESLEY A. MORRISSETTE
Assistant U.S. Attorneys
219 South Dearborn Street, Room 500
Chicago, Illinois 60604
(312) 353-5300

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I. INTRODUCTION

This case concerns what the Seventh Circuit described as “a large and blatant theft of trade secrets.” *Motorola Sols., Inc. v. Hytera Commc’ns Corp. Ltd.*, 108 F.4th 458, 468 (7th Cir. 2024). Behind in the market, defendant Hytera Communications Corporation, Ltd. stole gigabytes of source code and thousands of technical documents from Motorola concerning Motorola’s digital mobile radios (“DMR”). Using that code and information to hasten its own product development, Hytera then launched a competing DMR—and reaped millions in profits at Motorola’s expense in the DMR market. As set forth below, a fine of \$60 million—well below the Guidelines range, and the most allowed by the parties’ plea agreement under Federal Rule of Criminal Procedure 11(c)(1)(C)—and stringent conditions of probation are sufficient but not greater than necessary to account for the 18 U.S.C. § 3553(a) factors.¹

II. BACKGROUND AND OFFENSE CONDUCT

Hytera’s offense has been described at length elsewhere, including in the Government’s Version of the Offense and the Government’s *Santiago* Proffer. R. 220. The following highlights some of the key facts.

A. THE DMR MARKET

Motorola and Hytera are both telecommunications companies that develop, manufacture, and sell radios, among other equipment. Motorola is headquartered in Chicago. In 2007, Motorola introduced MotoTRBO—the first two-way digital mobile

¹ The government requests leave to file this memorandum in excess of the 15-page limit set forth in Local Rule 7.1, given the record’s volume and the number of factual, Guidelines, and restitution issues raised.

radio (DMR) in the market. See Gov't Vers., Exhibit A² (Rpt. of Dr. Wicker) ¶ 21; Exhibit B (Trial Tr. from *Motorola Sols., Inc. v. Hytera Commc'ns Corp. Ltd.*, Case No. 17-CV-1973 (N.D. Ill.) ("Civil Dkt.") at 145. Motorola had begun developing its DMR in around 2003. *Id.* ¶ 21. As Dr. Stephen Wicker, the government's expert on trade secrets, has explained:

Over the course of this R&D program, Motorola spent tens of millions of dollars to develop the MotoTRBO professional digital radio system, including the system's radios, infrastructure, and accessories. Nearly 300 employees worked on the MotoTRBO R&D program—approximately 100 people worked on the hardware and approximately 180 people work on the software.

Id. These engineers worked in the United States and in Motorola's Design Center in Penang, Malaysia. Included in the group of engineers working in Penang on Motorola's DMR program were Hytera's codefendant's in this case: Gee Siong Kok ("G.S. Kok"),³ Yih Tzye Kok ("Y.T. Kok" or "Y.T."), Samuel Chia Han Siong ("Chia"), Wong Kiat Hoe ("Ken Wong" or "Wong"), Yu Kok Hoong ("Y.K. Hoong" or "Y.K."), and Chua Siew Wei ("Eunice Chua" or "Chua"). During its DMR R&D, Motorola developed millions of lines of source code and thousands of technical specifications required to build a market-leading DMR product line.

Hytera is headquartered in Shenzhen, China, and its founder and chief executive was Chen Qingzhou. It lagged far behind Motorola in DMR development. In 2004, for example, according to an internal Hytera presentation, Chen had

² All Exhibit citations in this brief refer to Exhibits to the Government's Amended Version of the Offense ("GVO"), unless otherwise noted.

³ G.S. Kok pleaded guilty in this case. R. 74. He is awaiting sentencing.

declared that “[t]he DMR project is a new opportunity” with a “high degree of importance and a wide range and is critical to the future of the company.” Exhibit E. Chen recognized that “MOTOROLA has launched the first generation of DMR products,” and Hytera sought to “defeat[] MOTOROLA in the middle and high-end market.” According to minutes from a 2007 Hytera America meeting, the company’s “main priority [was] DMR.” Hytera needed to “catch [up] to Motorola and become a leader.” To accomplish this, Hytera’s minutes show, the company sought “a full complement of Motorola-compatible DMR technologies,” which, as Hytera put it, included “portable, a mobile and a repeater/base station. Motorola is opening the door in the U.S. for us. They are going through the big expense of introducing the technology. We have to come right behind them and ride the wave.” Exhibit F. Yet “capabilities for DMR design [were] much higher than” Hytera “expected,” as explained in a later 2007 internal presentation, and its “system design capabilities were insufficient.” Exhibit G.

B. THE CONSPIRACY

Behind in the market, Hytera turned to theft. Chen recruited G.S. Kok, who in turn recruited Sam Chia and Y.T. Kok, who, with the other named coconspirators, stole Motorola’s DMR source code and thousands of technical documents regarding DMR functions and architecture. With Motorola’s how-to guide in hand, Hytera launched its own, competing DMR in June 2010—years before it could have absent Motorola’s technology. It continued to copy Motorola code and designs in new products it made and sold internationally, including in the United States, through 2020.

1. The Conspiracy's Origins

The conspiracy began in 2006 and 2007. Chen and G.S. Kok, who was then working as a Senior Engineering Manager for DMR products in Penang, met at a conference in Las Vegas, and Chen began recruiting G.S. to Hytera. See Exhibit C at 4-5 (G.S. Kok's grand-jury statement). In 2006, G.S. travelled to Shenzhen, where he visited Hytera and was recruited to lead its DMR development. Exhibit C at 5-6. In 2007, Chen traveled to Penang to meet with G.S., and the two had dinner. Chen told G.S. that he wanted G.S. to oversee Hytera's DMR project. During their conversation, which continued after dinner in a hotel lobby, Chen wanted Hytera's DMR product to be cheaper than Motorola's product, but just as reliable with the same functionalities. G.S., however, told Chen it would take three or four years to develop a product like Motorola's product, assuming they could bring a team of Motorola employees over to Hytera. Absent that, G.S. estimated it would have taken about eight years to develop a product from scratch. Chen nevertheless told G.S. that Chen wanted the DMR project completed within two years.

In response, G.S. told Chen that a key part of Motorola's DMR product was the source code, which took Motorola significant time to develop. G.S. told Chen it took Motorola's software teams in Malaysia, China, and the United States four years to develop its DMR source code, and further, there was no way to complete Hytera's DMR project in two years unless Hytera had Motorola's source code. Chen told G.S. to take the source code. He made a reference to G.S. that "if we are caught, let them sue us," or words to that effect. Chen instructed G.S. to take as much of the source code from Motorola as he could. Exhibit C at 6-9.

When G.S. joined Hytera in early 2008, he met with Chen on a near-daily basis. Exhibit C at 10-12. Before and after G.S. joined, he recruited Motorola hardware and software engineers from its Penang Facility to work at Hytera. These included coconspirators Y.T. Kok, Samuel Chia, Ken Wong, Y.K. Hoong, and Eunice Chua. G.S. also knew that Y.T. had recruited the remaining individual defendant Phaik Ee Ooi (“Ooi”) to work at Hytera after Y.T. joined the company. G.S. targeted Motorola’s engineers due to their experience and their access to Motorola materials. Exhibit C at 10-16. Chen approved of the hiring of these Motorola engineers, and G.S. supervised them once they came to Hytera. *Id.*

G.S.’s position on Chen’s culpability is corroborated by other coconspirators’ statements. During its investigation, the government proffered two other key coconspirators: Sam Chia and Y.T. Kok. Both inculpated Chen in interviews with the government. For example, according to Y.T., at an onboarding meeting for the ex-Motorola employees:

CHEN spoke to the Recruited Employees about his mission and his target DMR product release date. Specifically, after an introduction, CHEN informed the Recruited Employees that he expected HYTERA’s DMR project team to complete development of HYTERA’s first DMR product in one year. Y.T. responded that this projected completion date was impossible. It was in this context that ***Y.T. asked CHEN if the Recruited Employees could reuse MSI’s [Motorola’s] information to develop HYTERA’s DMR. In response, and without directly acknowledging Y.T.’s question, CHEN said something to the effect of “I don’t care. I want to achieve the time to market. Do whatever you want.”*** In light of the Recruited Employees’ possession of MSI information, when CHEN responded in this way, the Recruited Employees understood that he was authorizing their reuse of MSI’s information at HYTERA.

....

Y.T.'s decision to ask this question may have arisen out of conversations with CHIA regarding the permissibility of reusing MSI's information at a competitor. It was not the Recruited Employees' company, it was CHEN's company. Therefore, Y.T. and the Recruited Employees did not want to do anything that was not authorized by CHEN, and by extension, HYTERA. If CHEN told the Recruited Employees to avoid using MSI's information, then the Recruited Employees would have refrained from using what they stole. However, CHEN's response was to do whatever they needed to do to meet his project deadlines. Y.T. translated this response for CHIA. Y.T. understood this response to be an implicit endorsement of the plan to use MSI's information to develop HYTERA's DMRs.

Exhibit D (Y.T. Kok's and Sam Chia's proffer reports).

Sam Chia similarly implicated Chen in greenlighting the conspiracy. As he told the government:

There were three people who were above G.S. in the organizational hierarchy at HYTERA: CHEN, TANG, and GUO (FNU) (GUO). TANG was the Chief Operating Officer at HYTERA and CHEN's advisor. GUO was the head of R&D at HYTERA. ***However, G.S. bypassed the chain of command and reported solely to CHEN.*** G.S. generally avoided speaking with TANG and GUO. ***This meant that G.S. provided DMR R&D status updates directly to CHEN.*** Further, CHIA learned from G.S. that CHEN attempted to recruit G.S. beginning in 2006. This meant that over a period of years G.S. grew accustomed to speaking directly with CHEN.

If G.S. wanted to provide CHEN with software-related updates or request additional resources for a project, there were instances in which CHIA would accompany G.S. to meet with CHEN. At these meetings, CHIA would share updates with G.S., and G.S. would provide these updates to CHEN since CHIA was unable to speak Mandarin. CHIA could not understand the content of G.S. and CHEN's conversations during these meetings and would sometimes "zone out" while they were speaking. Before CHIA gained any fluency in Mandarin, he might also "zone out" during other meetings between CHEN and HYTERA engineers.

Based on the Recruited Employees' conversations with G.S., who conveyed CHEN's directives, it was CHIA's impression that the Recruited Employees were to do whatever was necessary to

complete development of HYTERA's DMR product within the requisite time period, which included the use of MSI's information and code.

Exhibit D. Further, later in time, Chia reported Chen admitting to the conspiracy:

On several occasions beginning in approximately 2014, CHEN would say during one-on-one conversations with CHIA, ***"I'm surprised that Motorola has not yet sued me."*** Based on these statements, CHIA assessed that CHEN knew MSI's information was being used to develop HYTERA's products, otherwise there would be no reason for MSI to sue HYTERA. ***CHIA opined that CHEN "knew this was part of the game" and that "copying and lawsuits went hand-in-hand." CHEN smiled when he talked about the potentiality of being sued by MSI, which led CHIA to believe that CHEN was being boastful.***

Exhibit D. Chen remains Hytera's Chairman.⁴

To lure the coconspirators to Hytera, Hytera offered them significant pay increases. This included stock options. Records reflect the following:

Employee-Coconspirator	Motorola Final Salary + Bonus	Hytera Starting Salary + Bonus + Allowances	Increase	Hytera Stock Options
G.S.	\$90,952 USD	\$159,411 USD	75.27%	100,000 @ 1 RMB 200,000 @ 3 RMB
Y.T.	\$35,152 USD	\$70,276 USD	99.92%	80,000 @ 1 RMB 20,000 @ 3 RMB
Chia	\$31,636 USD	\$74,275 USD	134.78%	80,000 @ 1 RMB 20,000 @ 3 RMB
Ooi	\$24,214 USD	\$22,723 USD	-6.16%	40,000 @ 1 RMB 20,000 @ 3 RMB
Wong	\$28,524 USD	\$42,111 USD	47.63%	50,000 @ 1 RMB 20,000 @ 3 RMB
Hoong	\$16,402 USD	\$48,000 USD	192.65%	40,000 @ 1 RMB 20,000 @ 3 RMB
Chua	\$22,412 USD	\$54,277 USD	142.18%	40,000 @ 1 RMB 20,000 @ 3 RMB

⁴ <https://www.wsj.com/market-data/quotes/CN/XSHE/002583/company-people>.

2. The Conspiracy's Operation

Before leaving for Hytera, the coconspirators pillaged Motorola's databases for DMR code, protocols, and specifications.

Regarding the source code, at Chen and G.S. Kok's direction, Sam Chia downloaded, from ClearCase, DMR source code and provided it to G.S. Kok. Chia was G.S.'s first recruit from Motorola to Hytera, and while Chia was still working at Motorola, G.S. instructed him to steal the code. He explained to Chia that the biggest obstacle Hytera would encounter in meeting Chen's two-year release timeline was writing the code and Chia told G.S. that stealing the source code was the only way to meet Chen's deadline. Exhibit C at 14-15. After that discussion, in February 2008, via personal email, Chia told G.S. he had stolen a large amount of Motorola information—30 gigabytes—as depicted below.⁵

⁵ Certain material was highlighted for emphasis and not in the original communication.

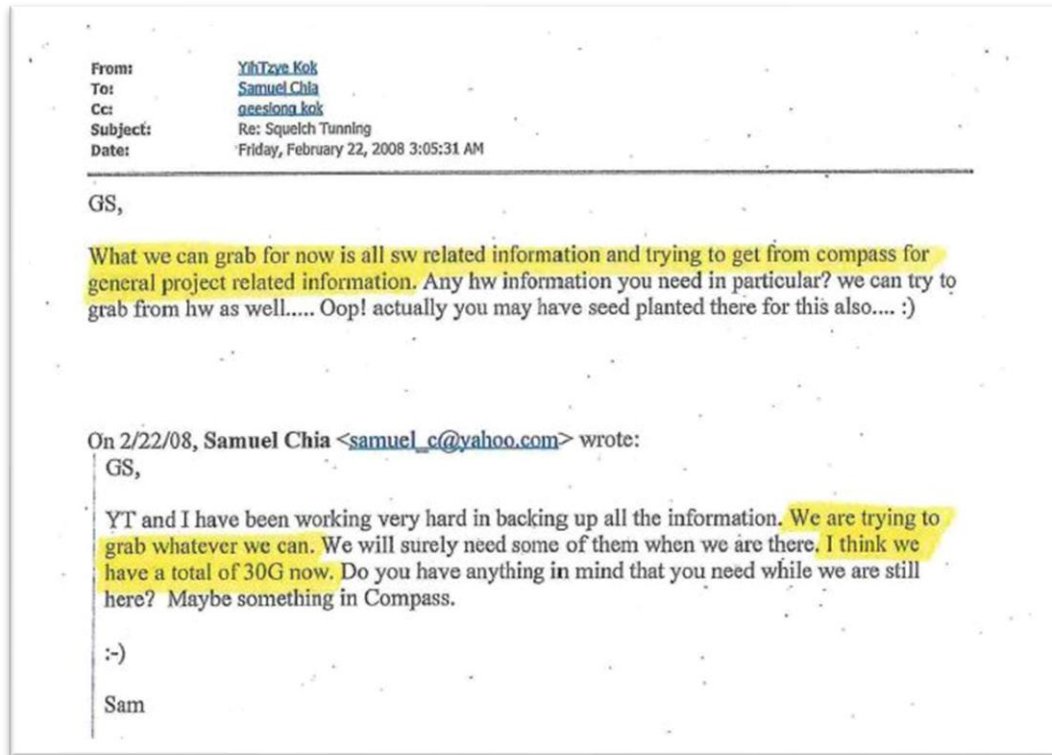


Exhibit H. In the email, Chia said that they “will surely need” Motorola’s information at Hytera and asked G.S. if he needed anything else while Chia and Y.T. were “still here,” flagging specifically the Compass database. As to the size of the reportedly stolen data—30 gigabytes—it surprised even G.S. Exhibit C. G.S. had, however, told Chia to take as much as he could from Motorola and to take everything related to DMR. In addition to Chia, Y.T. was responsible for stealing the source code from Motorola as needed for Hytera’s engineers. *See* Exhibit C.

Records produced by Hytera in the civil case also reflect the possession of stolen Motorola code on Hytera employees’ laptops through 2018. In the civil litigation, Hytera produced to Motorola the Hytera laptops of Y.T. Kok, Sam Chia, Y.K. Hoong, and Ooi. Each contained Motorola DMR files that were confidential and proprietary; Chia and Ooi’s laptops also contained Motorola source code. *See* GVO at 8-10. And

email records reflect the Hytera employees discussing the use of Motorola code. Only by way of example, on July 4, 2011, a Hytera software engineer (Employee HN) sent an email to another Hytera engineer with the subject “lib [library].” The email contained an attachment with the file name containing the ‘prefix “lib.” In the email, Employee HN wrote:

Dear [Employee HH], This is the library provided by Sam [Chia].
Please keep confidential. It is exclusive for the designated personnel
among us.

Exhibit K. When asked about the meaning of this email in a deposition in the civil case, Employee HN responded:

Things related to DSP [digital signal processor] would all need to be kept confidential. This instruction that DSP matters need to be kept confidential is ***from the company’s leadership***. So anything -- so DSP matters should be kept confidential. This is all that I have to say. I apologize. ***I have said too much***. [emphasis added]

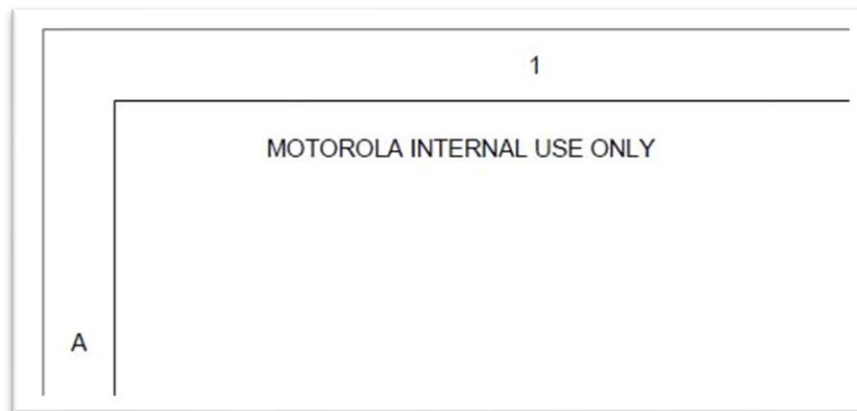
Exhibit L. In response to follow up questions in the deposition, Employee HN answered:

Well, one day he [Chia] told me that things related to DSP should not be known to more people. And it should actually just be within just a few of us. And he said if more people knew – well, if fewer people knew, the control would be better. And our code is also not supposed to be uploaded to [Hytera’s database]; say, information relating to physical layer should be kept on the local drive and not uploaded to [Hytera’s database]. And can only be kept confidential on the local drive. If I upload this to the [Hytera’s database], somebody may download it and steal it. Because it had already happened before, that someone stole the codes and sold them for money.

Exhibit L. Employee HN’s answer in the deposition is consistent with emails she sent years earlier while working on DMR development at Hytera: “This data can only be shared between you and me. No one else can obtain the [source] code and data . . .

unless I authorize. When implemented, only .lib and .h [library and header files compiled from the source code] can be uploaded. *The code can only be saved on your and my computers.*” Exhibit L.

As to the Motorola confidential DMR documents, Hytera stole *thousands* of them. This is evidenced by the emails and chats in which Hytera’s coconspirators discuss stealing documents, Compass logs of the stolen documents, and Hytera’s demonstrated possession of Motorola documents. For example, personal emails and chats recovered during the government’s investigation lay bare the conspirators’ flagrant attempt to steal whatever Hytera might need to build a competitive DMR. See GVO at 11-20. Only by way of example, on March 6, 2008, G.S. emailed Wong with the subject, “FPGA Block Diagram,” and wrote, “Enclosed the FPGA Block diagram that we had requested...KH Wong, can you forward the [REDACTED] schematic to me? Best regards, GS.” Wong, on the same day, responded with “the schematic that you requested” and attached a twenty-two-page document containing circuit specifications, with nearly each page marked “Motorola Internal Use Only”:



These sorts of back-and-forth emails—from Hytera employees, like G.S., to then-Motorola engineers, requesting Motorola proprietary and trade secret information, mostly over personal email accounts—were frequent in 2008. In April 2008, for example, G.S. asked Wong to send over Motorola’s trade secret information associated with its benchmarking and strategies. Wong obliged:

Date: Thu, 10 Apr 2008 23:26:54 +0800
From: ken2wkh@gmail.com
To: gskok@hotmail.com
Subject: Re: Digital measurements Test and Methods.

GS,
Here is the info you requested..... password:dmr to open.....

Rgds,
KH

On 4/10/08, **geesiong kok** <gskok@hotmail.com> wrote:

KH,
Do you have the F2 full digital test and measurements methods document? If yes please forward me a copy.
Thanks & best regards,
GS

Communications in which Motorola information was sent to Hytera for use by Hytera’s engineers continued into late 2008 and 2009. As noted above, while G.S. recruited most of the coconspirators to Hytera, Y.T. Kok recruited Phaik Ee Ooi, who came to Hytera in 2009. The emails reflect that Ooi, like the engineers who left for Hytera before her, was tasked by coconspirators to provide Motorola proprietary and trade secret information for use at Hytera. For example, in recruiting Ooi in October 2008, Y.T. shared with Ooi that Hytera was working on a DMR product and “need[ed]” “technical and non-technical info” and that Ooi should “try to copy out whatever information you can”:

[Y.T.]: entire China is no digital radio yet.

[Y.T.]: HYT need to have a digital product to have a full product portfolio

[Y.T.]: As I told you before.

Ooi: haha...
[Y.T.]: Technical and non-technical info
[Y.T.]: we will need all these information
[Y.T.]: try to copy out whatever information you can when you are free
Ooi: aha?
[Y.T.]: another thing...
Ooi: okie..
...
[Y.T.]: investor won't have confident to list the company in share market
Ooi: aha
[Y.T.]: if not able to do digital radios
Ooi: okie

During the same Gtalk session, on October 19, 2008, Y.T. and Ooi discussed instructions from Hytera leadership on how Motorola source code would be handled, with Y.T. claiming "All this is legal to develop DMR radios in China":

Ooi: you need to get a strong technicians from Motorola [to] help you
[Y.T.]: because they never do big project before
[Y.T.]: even with simple design
Ooi: so need more technicals :-
[Y.T.]: they really don't know what to do one...
Ooi: haha
[Y.T.]: After you are here, you will know exactly how the engineers here.
[Y.T.]: because now we need to do all components, not just Platform or low level
[Y.T.]: we keep the source code for our own references
[Y.T.]: HYT boss also asked us don't give Motorola source code.
[Y.T.]: just that we can't Motorola give source code to HYT
[Y.T.]: All this is legal to develop DMR radios.
[Y.T.]: in China
...
[Y.T.]: once you look at their work.... you will know that their standard is still way way below Motorola
...
[Y.T.]: We just applying our knowledge in new company.
[Y.T.]: as long as the code is still working, It will be fine to me.
[Y.T.]: the quality of the code surely can not compare to Motorola one.
[Y.T.]: so you can imagine la....
[Y.T.]: and let them implement by their own.
[Y.T.]: so we need to guide them and tell them what solution needed.

Second, the Motorola Compass logs for the coconspirators reflect a massive uptick in document access shortly before the coconspirators left Motorola for Hytera—

many of which the co-conspirators accessed for the first time, reflecting that the co-conspirators actions were not for legitimate employment needs at Motorola but were instead to download and steal the files for Hytera. Only by way of example, Samuel Chia, for example, had only ten file access events in Compass between January 2008 and February 11, 2008. But his file access increased on February 12 and 13, 2008—immediately after he attended G.S.’s recruitment trip to Penang, Malaysia. Specifically, on February 12, 2008, Chia’s user ID had 38 document access events. The next day, February 13, 2008, Chia’s user ID accessed 28 documents. In March 2008, Chia’s user ID accessed approximately 310 files—approximately 200 of which were accessed by Chia for the first time.

By April 2008, Chia’s rate of access skyrocketed to approximately 11,058 files—some accessed only seconds apart. On a single day, April 23, 2008, Chia accessed approximately 1,822 files. At least 1,855 of the documents accessed by Chia in April 2008 had titles or filenames referencing Motorola project names for DMR or the term DMR itself. Further, of these 1,855 files, approximately 1,466 were designated “Motorola Confidential Restricted.” As depicted below, CHIA’s rate of access to Compass between February 2008 and May 2008—when he submitted his resignation to Motorola and joined Hytera—dwarfed his usage for the prior five years:

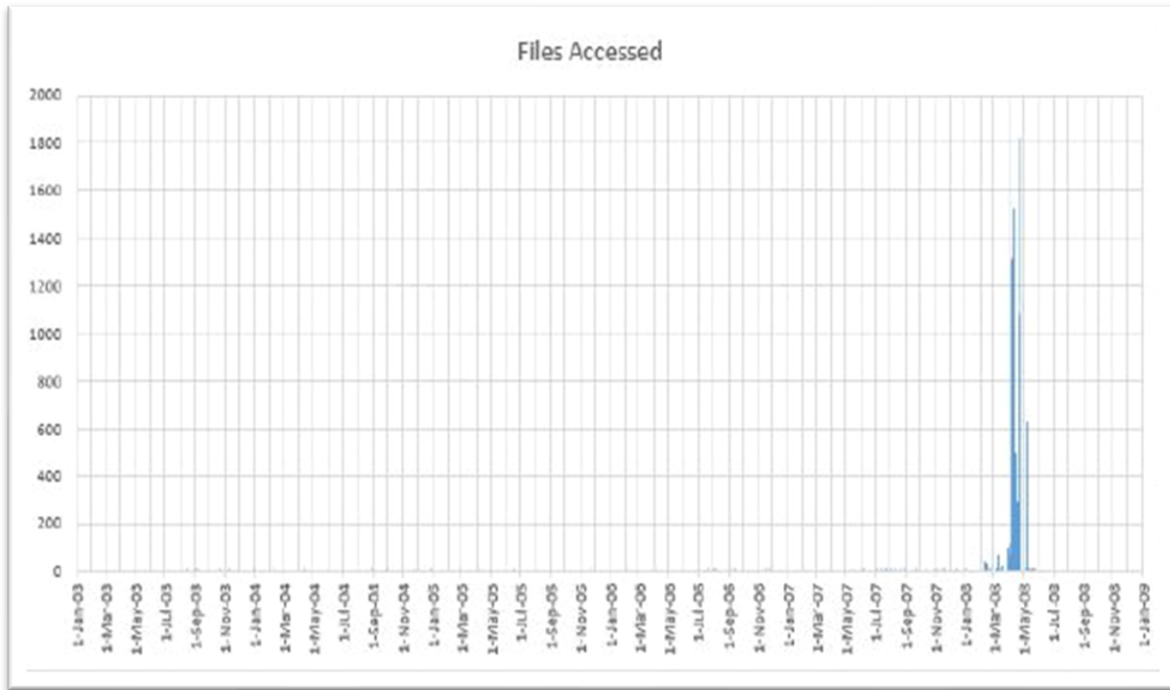


Chart of Compass Access for Sam Chia, who left Motorola in June 2008

The access logs for the other coconspirators, such as Phaik Ee Ooi, Eunice Chua, and Ken Wong, show a similar pattern: after their recruitment by Hytera began, and up to their departure from Motorola, a dramatic surge in database access, including in accessing restricted documents. *See* GVO at 21-23.

Third, documents and records produced by Hytera in the civil litigation reflect the company's possession of Motorola's confidential and trade secret information. Records produced by Hytera reflect that Hytera employees, including those who never worked for Motorola, had access to stolen Motorola information. Again, only by way of example, in a November 4, 2008 internal Hytera email to Chia, a Hytera engineer wrote: "Sam, I saw this in the document of 'MOTO DMR conformance testing of radio hardware.'" The engineer then asked a technical question about the "the 4FSK max deviation" and pasted the following image (redacted here) into his email:

5.1.2 Transmit 4FSK maximum deviation

This test measures the maximum frequency deviation.

Spec: highest deviation shall not exceed +/- [REDACTED] Khz (room) +/- [REDACTED] Khz (temp)

Exhibit AA. Based on records obtained during the civil litigation between Motorola and Hytera, at least as of 2017, Hytera was in possession of Motorola documents.

For example, in a September 11, 2008 internal Hytera email, an engineer requested an “SRS [software requirements specification] template” from Y.T. In response, Y.T. sent a document with filename VOX.DOC to the requesting engineer and copied another engineer. (According to the Compass logs, Chia had accessed a document with the filename “VOX.DOC” in Compass, on February 12, 2008, the last day of G.S.’s recruiting trip to Penang.). When opened, however, the document showed that Microsoft Word track changes had been enabled, and that someone had attempted to delete Motorola markings. The track changes markings and references to “Motorola”, however, were still visible in the file produced by Hytera—including the deletion of Motorola’s name and the header “MOTOROLA CONFIDENTIAL PROPRIETARY”:



Exhibit EE. Other emails openly discussing Motorola documents were sent around Hytera. To take just one example, on May 21, 2008, a Hytera engineer emailed another employee, neither of whom had previously worked for Motorola. The subject of the email was “moto DMR Production Debugging Document, FYI,” and the email began: “The attachment is the moto DMR production debugging document.” Exhibit FF. Attached to the email was a confidential Motorola document relating to DMR.

Many of these documents were found on coconspirator’s Hytera computers. For example, on Chia’s laptops were Motorola’s confidential documents, some bearing names similar to documents he accessed on Compass before his departure from Motorola to Hytera and other additional Motorola documents. *See* GVO at 27.

3. The Stolen Trade Secrets, Hytera’s Use of Them, and the Civil Case

Given the scope of Hytera’s smash-and-grab job, the number of trade secrets stolen and attempted to be stolen by Hytera is voluminous. For purposes of this case,

the government limited the defined trade secrets to 15—Trade Secrets A through O. Dr. Wicker’s description of those trade secrets—and the documents and code that comprise them—are set forth in detail in his report. See Exhibit A § IV. As set forth in Dr. Wicker’s report at length, Motorola code and trade secrets were used to develop and manufacture Hytera products for between 2010 and 2019. *See, e.g.*, Exhibit A at §§ VI, VII, and Exhibits C, D. Only by way of example, as part of the civil litigation, Hytera produced version 7.6 of its DMR subscriber source code. This code was used in multiple Hytera products sold through 2019, including its Tier II products, and it was multiple iterations removed from Hytera’s first DMR in 2010. Nevertheless, Hytera’s DMR code contained hundreds of thousands of lines of copied code from multiple Motorola DMR source code and library files. *See* GVO at 33-35. Hytera continued to copy such code—embodying Trade Secret A, Motorola’s source code, as well as part of other defined trade secrets—through 2020.

Hytera’s scheme began unraveling in 2017, when Motorola sued Hytera for trade-secret misappropriation and copyright infringement. *See Motorola Sols., Inc. v. Hytera Commc’ns Corp. Ltd.*, Case No. 17-CV-1973 (N.D. Ill.). Notably, however, the conspiracy extended even beyond that filing date. For example, according to Hytera internal emails, approximately two months after the filing of the civil lawsuit, on or about May 22, 2017, Chia sent a message using his internal Hytera email account to Chen with the subject line, “Summary of my dissappointments (Private).” Regarding the trade secret litigation, Chia wrote:

There is also no alignment done between all 3 [G.S., Y.T., and Chia] of us although I had approached GS 3 times requesting to align our stories.

Bottom line is that there is no alignment and guidance, it is surely bound to screwed up.

...

I fear I can be personally implicated once that trial starts . . . I currently feel that the risk to reward when deciding to join this company was not properly balance and it is now impacting many aspects of my life.

...

As I am a key witness, I am feeling a lot of pressure doing and saying the right thing ... Before meeting the external lawyers, I was told to tell the truth of all events that happened. However, after this has happened, I was told that I should to have said too much.

Exhibit NN. Chia also included a list of “Key items that are troubling me,” including, “Knowing that there is a risk in going to jail.”⁶

Chia later reported to the government that, after the email and his meetings with outside counsel, he met with Chen:

After CHIA’s meeting with HYTERA’s outside counsel, CHEN called CHIA into CHEN’s office. Lawyers were not present at this meeting. CHEN told CHIA that he had to be cautious about what he shared with attorneys. ***CHIA could not “say whatever he wanted” about the events relevant to the litigation. CHEN further instructed CHIA that (1) he should demonstrate a “sense of defense” and (2) he***

⁶ According to Hytera records, when G.S., Y.T. and Chia were ultimately fired by Hytera on October 23, 2018, for “gross misconduct against the Employer for failure to cooperate with requests for information” in Hytera’s investigation, they nonetheless received generous severance packages: G.S. received, after converting to dollars, \$82,772 as part of his “non-compete agreement” (the basis of which was “gross misconduct”), and Y.T. and Chia each received \$75,811 pursuant to termination agreements—along with a non-disclosure provision related to the civil litigation between Motorola and Hytera. In addition to these severance payments, according to Hytera’s interrogatory responses in the civil litigation, the three fired employees received other compensation following their termination: an additional \$117,748 for G.S., \$57,925 for Chia, and \$28,097 for Y.T. In addition, G.S. continued to work as a contract employee for Hytera after his purported “termination” in October 2018 according to, among other sources, G.S.’s Hotmail emails and received compensation and reimbursement for this work.

should avoid disclosing certain information to protect himself. At this meeting, CHIA understood that CHEN's warnings were meant to protect HYTERA rather than CHIA. As highlighted in his 05/22/2017 email, CHIA felt he was paying the price for doing what CHEN wanted. The Recruited Employees and HYTERA engineers' use of MSI's information to develop HYTERA's products was an open secret at HYTERA. However, CHIA felt like he was now the fall guy for this behavior.

Exhibit D.

All of this is reflective of a company that takes pains to evade financial responsibility for its misconduct. Indeed, the Seventh Circuit has gone out of its way to underscore Hytera's "gamesmanship and deception." 108 F.4th 458, 472. As the court explained:

It [Hytera] deleted stolen documents rather than producing them. It presented fabricated evidence inflating its research-and-development costs. Its witnesses have repeatedly contradicted themselves in depositions and at trial. It has dragged its feet in paying the royalty ordered by the district court, and it has obstructed discovery into its assets and ability to pay. Meanwhile, Hytera continues to sell DMR radios worldwide that Motorola claims still incorporate its copyrighted code and stolen trade secrets.

Id.

Indeed, even today, Hytera continues to profit from Motorola's stolen source code. Following the civil trial, Judge Norgle ordered a royalty order for products infected with Motorola's trade secrets. But Hytera's H-Series of DMRs were not included, based on Hytera's representation that the H-Series was developed in a "cleanroom" after the civil suit began. Motorola opened contempt proceedings, alleging that the H-Series, in fact, infringed on Motorola's trade secrets—and Judge Pacold, after lengthy briefing and an evidentiary hearing, agreed. As she held:

Although Hytera contends that the H-Series was the result of a redesign

and thus not covered by the royalty order, the court concludes—based on the evidence submitted by the parties and presented at a week-long hearing—that the H-Series is substantially like the products adjudicated at trial. The H-Series is built on the same basic foundation as the products covered in the royalty order and thus continues to unfairly benefit from the work Motorola did to solve the myriad engineering issues entailed in constructing a DMR platform. What Hytera labels a redesign is in truth substantially the same product.

Civil Dkt. 1905 at 2. Judge Pacold thus ordered Hytera to pay, in addition to the hundreds of millions already owed, \$59,300,624 in unpaid royalties on the H-Series and \$11,173,428 in interest. *Id.*

III. THE FINE AMOUNT

When a defendant is an organization, a key principle in sentencing is the imposition of a fine that reflects “the seriousness of the offense and the culpability of the organization.” U.S.S.G., Ch. Eight, Intro. Cmt. To calculate the appropriate Guidelines range for the fine, the Court must determine the offense level from Chapter Two, as it would for an individual defendant. *See* U.S.S.G. §§ 8A1.2(b)(2)(B), 8C2.3. For a violation of 18 U.S.C. § 1832, the applicable Guideline is § 2B1.1.

A. The Offense Level Pursuant to Guidelines § 2B1.1

The applicable offense level is 36. Probation has determined that the base offense level is 6 because the offense of conviction does not call for a statutory maximum imprisonment of 20 years. U.S.S.G. §2B1.1(a)(2). PSR ¶ 102. The government agrees.

The government and Probation also agree that because a substantial part of a fraudulent scheme was committed from outside the United States—namely Malaysia

and China—the base offense level is increased by two levels, pursuant to U.S.S.G. §2B1.1(b)(10)(B). PSR ¶ 107.

The Guidelines also impose a two-level increase where the offense involved the misappropriation of a trade secret, and the defendant knew or intended that that trade secret would be transported or transmitted out of the United States. U.S.S.G. § 2B1.1(b)(14). Probation agrees that trade secrets were misappropriated but concluded that the trade secrets were “already outside the United States when stolen” and thus declined to impose that enhancement. PSR ¶ 108. The government disagrees, and for the reasons discussed below, the two-level increase applies.

The parties and Probation disagree on the applicable loss amount for the purposes of calculating the Guidelines. As discussed below, a reasonable and conservative estimate of loss is \$174,400,446, which represents Motorola’s lost profits between 2010—when Hytera launched its first DMR product—and 2019 when testimony was given in the civil case. This results in a 26-level increase, because the loss amount is more than \$150,000,000 and less than 250,000,000. U.S.S.G. § 2B1.1(b)(1)(N).

The resulting offense level pursuant to Guideline § 2B1.1 is 36. Pursuant to Guideline § 8C2.4(d), an offense level of 36 results in an \$80,000,000 base fine.

1. The Loss Amount

a. Legal Framework

For the purposes of the Guidelines, the Court must calculate a loss amount. *United States v. Jerry*, 55 F.4th 1124, 1131 (7th Cir. 2022) (“[A] district court should begin all sentencing proceedings by correctly calculating the applicable Guidelines

range,” and this range should serve as “the initial benchmark” for the sentence) (citing *Gall v. United States*, 552 U.S. 38, 49 (2007)). This calculation “need only be a reasonable estimate of loss.” *United States v. Watts*, 535 F.3d 650, 658 (7th Cir.2008) (quotation omitted); see also *United States v. Gordon*, 495 F.3d 427, 431 (7th Cir. 2007) (loss estimate need not be “rendered with scientific precision”); U.S.S.G. § 2B1.1 cmt. n.3(C). The estimate should be based on available information, and courts may consider a variety of different factors. *Id.*

To calculate the loss attributable to a defendant, courts look to “the reasonably foreseeable pecuniary harm that resulted from the offense.” *United States v. Griffin*, 76 F.4th 724, 745 (7th Cir. 2023) (citing U.S.S.G. § 2B1.1 cmt. n.3(A)(iv)). “Pecuniary harm is ‘reasonably foreseeable’ if ‘the defendant knew or, under the circumstances, reasonably should have known,’ that it ‘was a potential result of the offense.’” *Id.* In cases involving “proprietary information (*e.g.*, trade secrets),” courts may also consider “the cost of developing that information or the reduction in the value of that information that resulted from the offense.” U.S.S.G. § 2B1.1(b)(1)(B). If loss cannot be reasonably determined, “the court shall use the gain that resulted from the offense as an alternative measure of loss.” U.S.S.G. § 2B1.1 cmt. n.3(A)(iv).

b. Analysis

Hytera pleaded guilty to a conspiracy beginning in June 2007 and ending June 2020. R. 12; R. 353. Hytera began selling DMR radios, which were designed based on stolen Motorola source code and other stolen proprietary and trade secret information, in 2010 and continued to sell those radios for more than a decade. Hytera became one of Motorola’s principal competitors for DMR sales, which it could not have

done absent its large-scale theft and reliance on Motorola's stolen information. As a result, Motorola lost profits upon Hytera's entry into and persistence in the DMR market. Because Hytera stole Motorola's trade secret information, used that information to accelerate its product development, and relied on Motorola's stolen technology in its products continuously throughout the conspiracy period, Motorola's lost profits were reasonably foreseeable to Hytera—indeed, those lost profits were the point of the crime.

Dr. James E. Malackowski testified in the civil case as an expert witness. *See* Exhibit MM at 3; *see also* Motorola's Victim Impact Statement (VIS), Ex 31 (same). Based on that testimony, and other evidence in the civil case, Judge Norgle, who presided over the trial and posttrial motions, found that Motorola spent \$117,800,000 to develop the trade secrets at issue in that case, which he noted was "only a portion of the research and development that Motorola invested to launch its DMR radios." Civil Dkt. 1100 at 9. The \$117.8 million in costs included development time, measured in "staff months" for Motorola trade secrets including "Connectivity, XCMP, Software, DMR Protocol Stack, Hardware, Testing and Benchmarking, and Repeater Functionality" (Civil Dkt. 1100 at 10-11), which correlate to trade secrets described in the indictment. *Compare* Exhibit MM; VIS, Attachment 1 (describing overlap between trade secrets alleged in civil case and indictment) *with* Civil Dkt. 1100 at 10-11 (laying out Motorola's "staff months" dedicated to developing the same trade secrets). Judge Norgle found Hytera's efforts to dispute Mr. Malackowski's estimates "not credible." *Id.* at 12. Judge Norgle also adopted Mr. Malackowski's findings that

Hytera avoided \$76,300,000 in research and development costs for its DMR program. Civil Dkt. 1100 at 9-10; 13-14.

The court also made findings of facts related to Hytera's ill-gotten gains resulting from its theft. The court concluded that, from 2010 through June 2019, Hytera's DMR revenues were \$532,025,673 and its profits were \$272,000,000. Civil Dkt. 1100 at 17. While the \$272 million in profits were the result of Hytera's theft, Motorola was limited in what it could recover in the civil case because the Defend Trade Secrets Act (DTSA), 18 U.S.C. § 1836, which provided the civil cause of action relied on by Motorola, was not enacted until May 2016. *Id.* Accordingly, Motorola's recovery was reduced to \$135,800,000, the amount of Hytera's profits from only 2016 through 2019. Here, the conspiracy began in 2007 and the criminal statute, 18 U.S.C. § 1832, predates the conspiracy. *See* The Economic Espionage Act of 1996, PL 104–294, October 11, 1996, 110 Stat 3488.

Finally, Judge Norgle found that, based on Mr. Malackowski's testimony, Motorola's lost profits—again from 2016 through 2019 only—were \$86,200,000. Civil Dkt. 1100 at 4.

The government's position is that lost profits, valued at \$174,400,446, constitute the appropriate reasonable estimate of loss required by the Guidelines. Motorola has presented a declaration from Mr. Malackowski that explains that Motorola's lost profits from January 2010 through June 20, 2019, and describes his methodology (Exhibit MM at 2-3), the same methodology approved by the district

court in the civil case.⁷ *See id.* To reach these numbers, Mr. Malackowski multiplied Hytera’s sales of DMR units by Motorola’s “Hytera-excluded market share”—resulting in Motorola’s lost unit sales—then multiplied these lost units by Motorola’s average revenue per unit to determine Motorola’s lost revenues. *See id.* Finally, Motorola’s incremental expenses were deducted to determine Motorola’s lost profits. *Id.* This calculation results in a 26-level increase pursuant to U.S.S.G. 2B1.1(b)(1)(N) because the loss is more than \$150,000,000 and less than \$250,000,000.

Mr. Malackowski’s calculations, documented in his expert reports and supported by his trial testimony in the civil case, and Judge Norgle’s reliance on these calculations in his finding of fact and conclusions of law, provide a reasonable estimate of loss for the purposes of the Guidelines calculation. *See United States v. Schaefer*, 384 F.3d 326, 334 (7th Cir. 2004) (a “reasonable estimate of the loss” is all the Guidelines require).

Courts have endorsed the use of lost profits as an appropriate measure loss in theft of trade secrets cases. In *United States v. Xu*, 114 F.4th 829 (6th Cir. 2024), the defendant was convicted of several theft of trade secret offenses. The victim did not suffer actual losses, and at sentencing, the district court was required to determine the intended loss under U.S.S.G. § 2B1.1. The district court rejected defendant’s arguments that “any future potential loss” was speculative, and it instead based the loss calculation on “intended future loss to [the victim company’s] market share” and

⁷ The government agrees that prejudgment interest is excluded from the Guidelines loss calculation. *See* U.S.S.G. § 2B1.1 cmt. n.3(C)(i). Though for the reasons discussed below, interest is recoverable by the victim as restitution.

found that the intended loss was \$50,000,000. *Id.* at 838, 846. The Sixth Circuit affirmed, noting that the district court’s findings were based on “overwhelming evidence demonstrating that Xu specifically targeted [the victim company’s] trade-secret technology” and that the victim company’s technology “provided a significant competitive advantage and sizable market share worldwide.” *Id.* at 845. As to the valuation, the court acknowledged that determining the value of a trade secret is “no easy task,” but emphasized that the Guidelines do not require an “exact figure.” *Id.* Rather a “reasonable estimate will do.” *Id.* The court “endorse[d] the use of hypothetical lost profits to estimate the intended loss from a company targeted for attempted trade-secret theft.” *United States v. Xu*, 114 F.4th 829, 846 (6th Cir. 2024) (citing *United States v. You*, 74 F.4th 378, 398-99 (6th Cir. 2023)). The Sixth Circuit’s reasoning applies fully here, where Hytera caused actual losses to Motorola spanning more than a decade.

These totals are also reasonable because they understate Motorola’s lost profits. As alleged, Hytera’s conspiracy ended on June 22, 2020. Thus, the \$174 million is a conservative estimate, because it excludes nearly a year’s-worth of lost profits, from June 30, 2019 through June 22, 2020.

Probation concludes that the loss amount is approximately \$135,800,000—the compensatory damages awarded in the civil case. According to Probation, this reflects the “gain unlawfully enjoyed by Hytera as a result of the instant offense.” PSR ¶ 106.⁸

⁸ The Guidelines instruct that courts should “use the gain that resulted from the offense as an alternative measure of loss only if there is a loss but reasonably cannot be determined.” USSG §2B1.1, cmt., n. 3(B). The Guidelines are so structured because relying on the gain

Given that this calculation is based on a jury finding, and supported by Judge Norgle's findings of fact, this is a second reasonable estimate available to the Court for calculating the loss amount under U.S.S.G. § 2B1.1. Because \$135,800,000 is greater than \$65,000,000 and less than \$150,000,000, Probation recommends a 24-level increase pursuant to U.S.S.G. § 2B1.1(M).

Significantly, however, the \$135,800,000 calculation fails to account for six years of Hytera's profits for the count of conviction. As noted above, Motorola could not recover damages that predated the enactment of the DTSA in 2016. The \$135,800,000 does not reflect the gain to Hytera from the instant offense (*see* PSR ¶ 106), because it is limited to profits from 2016 to 2019. Thus, were the court to rely on Hytera's gains to support its calculation under 2B1.1, as proposed by Probation, the correct total would be at least \$272,000,000, which includes ill-gotten gains from 2010 to 2019.⁹ *See* Civil. Dkt. 1100 at 17. This amount is greater than \$250,000,000 and less than \$550,000,000 and results in a 28-level increase. U.S.S.G. § 2B1.1(b)(1)(P).

"ordinarily underestimates the loss." *United States v. Triana*, 468 F.3d 308, 323 (6th Cir. 2006), *citing* *United States v. Snyder*, 291 F.3d 1291, 47 1295 (11th Cir. 2002). A loss calculation should not be "abandon[ed] ... in favor of a gain amount where a reasonable estimate of the victims' loss is feasible." *United States v. Munoz*, 430 F.3d 1357, 1371 (11th Cir. 2005), *quoting* *United States v. Bracciale*, 374 F.3d 998, 1004 (11th Cir. 2004).

⁹ Because Mr. Malackowski testified in 2019, his conclusions about Hytera's gain—like his lost profit calculations—do not extend into 2020, the end of the charged conspiracy. Thus, even the expanded analysis of Hytera's profits is underinclusive, and therefore a conservative estimate of Hytera's gains.

2. Hytera Knew and Intended That Motorola's Trade Secrets Would be Transported or Transmitted Outside the United States.

A two-level increase is appropriate because the offense involved misappropriation of trade secrets, and the defendant knew or intended that the trade secrets would be transported or transmitted out of the United States. Motorola is a Chicago-based company, with offices in Malaysia, among other locations. Hytera is based in China. Motorola designed and developed its DMR products through the efforts of its employees worldwide and stored information in at least two systems, Clearcase (for source code) and Compass (other proprietary information). Servers for Compass were based in the United States and, by accessing information on those servers, the individual defendants knew, or at least intended, that Motorola's trade secret information would be transported or transmitted outside the United States. The individual defendants' intent is evidenced by the extraordinary increase in their rates of access to Compass as they began raiding Motorola's systems for documents to send to their new employer: Hytera. GVO at 21-23 (showing spikes in Compass document access by Chia, Ooi, Chua, Wong, and Y.T.).

3. The Base Fine

Having calculated the offense level from Chapter Two, the next step is to determine the base fine amount, which is the greatest of (1) the amount determined in the fine table in § 8C2.4(d), (2) the pecuniary gain to the organization from the offense, or (3) or the pecuniary loss from the offense caused by the organization, to the extent the loss was caused intentionally, knowingly, or recklessly. U.S.S.G. § 8C2.4(d).

The total offense level under U.S.S.G. 2B1.1 is 36. The corresponding base fine is \$80,000,000, pursuant to U.S.S.G. § 8C2.4(d). The loss to Motorola (excluding interest and attorney's fees) is \$174,400,446, and the gain to Hytera is \$272,000,000. Thus, \$272 million is the base fine amount, because it is greater than the fine calculations pursuant to § 8C2.4(a)(1) and (3).

4. Culpability Score

The government and probation agree that the base Culpability Score is five. PSR ¶ 111; *see also*, U.S.S.G. 8C2.5(a).

The government also agrees with Probation that Hytera had more than 1,000 employees and that an individual within high-level personnel of the organization participated in, condoned, or was willfully ignorant of the offense. Specifically, as Probation notes, “Hytera’s plan to steal trade secrets ‘began at the highest levels of Hytera’s corporate brass: President and CEO Chen Qinzhou personally negotiated with [G.S.], convincing him to leave Motorola and join Hytera.” PSR ¶ 113 (quoting Judge’ Pacold’s August 29, 2025 Memorandum and Order, Civil Dkt. 1905 at 1). In addition, G.S. was himself a high-level Hytera employee, heading the DMR program and serving as a Hytera Board Member. GVO at 30-31. The culpability score is therefore increased by four points, pursuant to §8C2.5(b)(2)(A)(i).

Finally, the culpability score is increased by three points because Hytera “deleted evidence, fabricated evidence, and produced witnesses which contradicted themselves at depositions and trial.” PSR ¶ 118. This finding is supported by the Seventh Circuit’s opinion explaining that “deleted stolen documents rather than producing them. It presented fabricated evidence inflating its research-and-

development costs. Its witnesses have repeatedly contradicted themselves in depositions and at trial. It has dragged its feet in paying the royalty ordered by the district court, and it has obstructed discovery into its assets and ability to pay.” *Motorola Sols., Inc.*, 108 F.4th 458, 472. It is also supported by the undisputed fact that Chia and Ooi wiped evidence from their computers, as well as Hytera’s internal emails, including a May 22, 2017, email from Chia to Chen with the subject line, “Summary of my dissapointments (Private),” in which Chia sought “alignment” among the coconspirators. GVO at 36-37 (citing Exhibit NN).

One point is subtracted for acceptance of responsibility. PSR ¶ 120. The resulting culpability score is 11.

B. The Guidelines Fine Range

Based on a culpability score of 11, pursuant to Guideline § 8C2.6, there is a minimum fine multiplier of 2.0 and a maximum fine multiplier of 4.0. Here, the base fine is \$272,000,000. Thus, the applicable fine range is \$540,000,000 to \$1,088,000,000.

C. The Statutory Maximum

Before turning to the appropriate fine to be imposed, capped here at \$60,000,000, (R. 353 ¶ 11), the Court must also determine the statutory maximum fine. The statute of conviction, 18 U.S.C. § 1832, provides that organizational defendants, like Hytera, “shall be fined not more than the greater of \$5,000,000 or 3 times the value of the stolen trade secret to the organization, including expenses for research and design and other costs of reproducing the trade secret that the organization has thereby avoided.” Any fact, other than the fact of a prior conviction,

that increases the penalty for a crime beyond the prescribed statutory maximum must be alleged and proven beyond a reasonable doubt. *United States v. Apprendi*, 530 U.S. 466 (2000). *Apprendi* applies to the alternative fine structure in 18 U.S.C. § 3571(d), which permits a maximum fine of twice the gross gain or loss resulting from the offense. See *Southern Union Co. v. United States*, 567 U.S. 343 (2012). For the purposes of this sentencing only, the government agrees that the reasoning in *Southern Union* applies to § 1832(b). See *United States v. LaGrou Distribution Sys., Inc.*, 466 F.3d 585, 594 (7th Cir. 2006).

In the plea agreement, Hytera did not admit facts establishing “the value of the stolen trade secret(s)” to Hytera, “including expenses for research and design and other costs of reproducing the trade secret that [Hytera] has thereby avoided.” See R. 353 ¶ 6. Because this alternative fine structure increases the penalty Hytera can face, the Court must find facts in support of the alternative fine structure beyond a reasonable doubt.¹⁰ For reasons set forth below (*infra* Section V), the fair value of the trade secrets, at a minimum, is \$174,400,446—the proper value of the stolen trade secrets as assessed by Motorola’s profits lost as a result of Hytera’s use of them in the market. Multiplied by three, the statutory cap is \$523,201,338.¹¹

¹⁰ The parties have agreed to a plea addendum in which Hytera waives the right to have any facts needed to determine the alternative fine set forth in either 18 U.S.C. § 1832(b) or 18 U.S.C. § 3571(c) and (d) found by a grand jury and charged in the Indictment.

¹¹ Alternatively, even if the court were to use the research-and-development costs to Motorola in devising the trade secrets, the cap would be \$353,400,000, three times \$117,800,000, which, as Judge Norgle found, was what Motorola spent developing the secrets. Civil Dkt. 1100 at 9, 11. Thus, in either event, the statutory cap is over \$5,000,000 and well exceeds the \$60,000,000 cap under Rule 11(c)(1)(C).

IV. SECTION 3553(a) FACTORS

The Sentencing Guidelines provide a starting point for sentencing. *Gall*, 552 U.S. at 49-50. “The Guidelines remain an essential tool in creating a fair and uniform sentencing regime across the country.” *United States v. Mykytiuk*, 415 F.3d 606, 608 (7th Cir. 2005). The Court, however, must consider the factors set forth in 18 U.S.C. § 3553(a) in determining an appropriate sentence. As explained below, a below-Guidelines fine of \$60 million and five years’ probation are sufficient but not greater than necessary to reflect the seriousness of the offense, promote respect for the law, provide just punishment, afford adequate deterrence, and account for the defendant’s history.

A. The Nature, Seriousness, and Circumstances of the Offense Warrant a \$60 Million Fine, the Statutory Maximum Term of Probation, and Stringent Conditions.

Hytera’s crime was egregious and lasting. With the radio market shifting to digital over analog, and with Hytera well behind in research and development, it took to out-and-out theft. Hytera lured multiple engineers from Motorola, and its leadership—including Chen and G.S.—instructed those coconspirators to take what they could on their way out the door. And they did. Sam Chia and Y.T. Kok stole gigabytes of source code. They and others stole thousands of confidential and proprietary documents. Hytera, then, put those secrets to use, turning around a DMR in the two-year timeline aggressively pursued by Chen, a fraction of the time, and at a fraction of the cost, it took Motorola to launch its DMR. *See, e.g.*, Civil Dkt. 1100 (finding Hytera “avoided spending ... \$73,583,897 ... in R&D after” after 2016 alone).

Hytera’s misconduct was not limited to 2008 to 2010 either. Knowing that it had built its DMR on Motorola’s work, it continued to rely on and replicate the stolen code in product versions through at least 2019—reaping millions profits and growing a substantial market share in the process. Even when Motorola sued in 2017, Hytera did not relent. It continued pushing its misappropriated DMR, while fighting the civil case tooth and nail, denying responsibility, and even covering up its crimes. Chia wrote to Chen seeking “alignment” on the coconspirators’ stories to avoid jail, and he and Ooi deleted evidence from their computers.

Such egregious conduct warrants, at a minimum, a five-year term of probation, the below-Guidelines fine of \$60 million and stringent probationary conditions. It was a sophisticated, lengthy crime designed to dishonestly profit from another company’s hard, smart work, and get rich at the victim’s expense. To punish Hytera, and to reflect the seriousness of the crime, a substantial fine is required. And “to ensure” that “will be fully implemented,” and “to ensure that steps will be taken within the organization to reduce the likelihood of future criminal conduct,” the court should order five years’ probation with the conditions discussed below. *See* U.S.S.G., Ch. 8, Intro. Cmt.

B. Hytera’s History and Characteristics, the Need for Deterrence, and the Need to Provide Restitution to Motorola Similarly Require the Maximum Fine and Stringent Conditions.

A substantial fine and probation are also required to account for Hytera’s history, deter future misconduct, and ensure Motorola is paid restitution. For more than a decade and a half, Hytera has been profiting from the information it stole from Motorola. Indeed, even its purportedly revamped, “cleanly” designed DMR—the H-

Series—infringes, according to Judge Pacold, on Motorola’s protected source code. *See* Civil Dkt. 1905 at 2 (Hytera, with the H-Series, “continues to unfairly benefit from the work Motorola did to solve the myriad engineering issues entailed in constructing a DMR platform. What Hytera labels a redesign is in truth substantially the same product.”) And even while conceding liability after the civil verdict and with its guilty plea, Hytera has often failed to meet its financial obligations in the civil case, resulting in contempt findings and restraining orders issued by Judge Pacold. *See, e.g.,* VIS at 14-15; *infra* at Section V.B. A substantial fine and probation are required to account for Hytera’s shortcomings and ensure its compliance with the law and court’s orders going forward.

Moreover, the \$60 million fine and five years’ probation will further the sentence’s deterrent effect. As evidenced by this case, it is all too easy for global competitors to poach rival’s employees and ask them to steal trade secrets to benefit their future employer. The problem is particularly acute in countries that do not have, or do not enforce, competition and intellectual-property laws—countries from which global manufacturers often source talent and in which they compete. A substantial fine and the Court’s five-year supervision of Hytera will send a message to other manufacturers that such misconduct comes with steep penalties that can affect their bottom line.

V. RESTITUTION

The Court’s sentence must also account for restitution owed to Motorola. 18 U.S.C. § 3663A(a)(1). At sentencing, the government “must establish the restitution amount by a preponderance of the evidence.” *United States v. Griffin*, 76

F.4th 724, 750 (7th Cir. 2023). The Court may rely on “well supported” and “reliable” information in fashioning restitution. *United States v. Robl*, 8 F.4th 515, 529 (7th Cir. 2021). And where, as here, the defendant is guilty of conspiracy, “the court can order restitution for damage resulting from any conduct that was part of the conspiracy and not just from specific conduct that met the overt act requirement of the conspiracy conviction.” *United States v. Sawyer*, 825 F.3d 287, 295 (6th Cir. 2016). In this case, the total figure the Court should order is \$290,799,352.30, comprised of the following:

Sum	Description
\$174,400,446.00	Lost profits from theft of trade secrets
\$114,215,523.00	Prejudgment interest
\$2,183,383.30	Attorney’s fees for criminal case
\$290,799,352.30	TOTAL

Each of these categories are recoverable as restitution and more than adequately supported in the record and, contrary to the Probation Office’s and Hytera’s position, calculating restitution is not too complex, given the already-compiled, detailed record in this case.

A. Lost Profits, Prejudgment Interest, and Attorneys’ Fees.

First, lost profits are the proper measure of lost-value recovery under the Mandatory Victim Restitution Act. Section 3663A(a)(1) requires that the court order restitution to victims of, among other crimes, offenses “against property.” Section 3663A(b)(1)(B) also instructs that where the “return of the property” stolen is “impossible, impracticable, or inadequate,” the defendant owes the greater of the

value of the property at the date of its theft or at the date of sentencing. 18 U.S.C. § 3663A(b)(1)(B).

“[C]riminal restitution refers only to the restoration of something that the defendant had taken from the plaintiff, *including a profit.*” *United States v. Havens*, 424 F.3d 535, 537 (7th Cir. 2005) (emphasis added) (citing *United States v. Scott*, 405 F.3d 615, 618 (7th Cir. 2005)). Thus, where, as here, the “property” in question is intellectual property, “restitution for lost profits” can be “the ‘value of the property’ the victim lost.” *United States v. Milstein*, 481 F.3d 132, 136-37 (2d Cir. 2007) (in a trademark case, “the District Court, acting within its broad discretion to determine restitution, properly employed this measure, and, based on the evidence before it, made a reasonable estimate of the amount of lost sales.”); *see also, e.g., United States v. Sterling*, 685 F. App’x 880, 885 (11th Cir. 2017) (in a counterfeiting case, “the wholesale price” was indicative of the “actual lost value”). *United States v. Jones*, 616 F. App’x 726, 728 (5th Cir. 2015) (in a counterfeiting case, “lost net profits was the proper measure because the MVRA’s purpose is to compensate a victim for its losses”). *United States v. Sterling*, 685 F. App’x 880, 885 (11th Cir. 2017) (in a counterfeiting case, similar). “Indeed, to hold to the contrary would thwart Congress’s primary aim” in enacting the MVRA—“to require the wrongdoer to the degree possible to restore the victim to his or her prior state of well-being.” *Milstein*, 481 F.3d at 136 (cleaned up); *see also, e.g., United States v. Beydown*, 469 F.3d 102, 108 (5th Cir. 2006)

(“Because the purpose of the MVRA is to compensate a victim for its losses, the appropriate measure in this commercial setting is lost net profit.”).¹²

In this case, the proposed value of the trade secrets—about \$174.4 million—is amply supported by the record, and in line with the findings of the civil jury and Judge Norgle. As Dr. Malackowski opined, and as explained above, that figure is the product of the affected units of radios Hytera sold, multiplied by Motorola’s market share without Hytera’s product—determined by product tiers and geographic markets—minus incremental expenses. See Exhibit MM at 4, Appendix 1. This is the same methodology that Judge Norgle adopted in issuing his posttrial Findings of Fact and Conclusions of Law (Civil Dkt. 1100 at 4¹³), after having heard Dr. Malackowski testify.¹⁴ This methodology was then uncontested by Hytera and undisturbed by the

¹² To be sure, some courts have concluded that lost profits are not recoverable in any cases other than those involving “bodily injury.” See *United States v. Wilfong*, 551 F.3d 1182, 1185 (10th Cir. 2008) (discussing the split). As an initial matter, § 3663A(b)(1) does not necessarily govern in intellectual-property cases; there is, in cases like this, no apparent “damage to or loss or destruction of” *stolen* trade secrets. Even if § 3663A(b)(1) did govern, those decisions did not address, as *Milstein* and other cases addressed, the proper valuation of property that is intellectual in nature, and thus did not address whether lost profits can be the proper valuation for stolen intellectual property. *United States v. Buchanan*, No. 22-3301, 2023 WL 5352223, at *9 (6th Cir. Aug. 21, 2023), for example, which Hytera cited in its Version of the Offense (DVO at 70 n.442), did not dispute *Milstein*’s holding that “the value of the property—intangible trademarks—could be measured by the victims’ lost sales caused by the defendant.”

Were the Court to disagree with *Milstein*, the value of the stolen trade secrets is, at a minimum, the research-and-development cost to Motorola in devising them, which is \$117.8 million, plus prejudgment interest—the amount Judge Norgle found. Civil Dkt. 1100 at 9, 11.

¹³ The figure in the civil case was \$86.2 million, because the damages were temporally limited by the Defend Trade Secrets Act’s effective date in May 2016. Dr. Malackowski’s figures here apply the same analysis but back to the time when Hytera began selling radios that used Motorola’s trade secrets. Exhibit MM at 3.

¹⁴ Judge Norgle also found Dr. Debra Aron, Hytera’s expert on damages, not credible in calculating Hytera’s profits from the misappropriation. Civil Dkt. 1100 at 18-19.

Seventh Circuit on appeal, *see Motorola Sols.*, 108 F.4th 458, 493 (7th Cir. 2024) (“after the court issued its order and findings of fact, Hytera dropped any dispute with the amount of Motorola’s lost profits”).

Second, victims, like Motorola, are entitled to prejudgment interest. “A clear majority of” courts of appeals “have interpreted the MVRA and its predecessor ... to permit an award of prejudgment interest when it more fully compensates the victim's loss.” *United States v. Fike*, 140 F.4th 351, 356 (6th Cir. 2025); *see also, e.g., United States v. Clavielle*, 429 F. App’x 617, 620 (7th Cir. 2011) (“Under the [MVRA] and its predecessor, the Victim and Witness Protection Act, prejudgment interest can be included when calculating restitution.”). Here, Dr. Malackowski used the interest methodology proposed by Hytera and adopted by Judge Norgle in calculating the interest owed back to 2010, when Hytera began selling radios with Motorola’s trade secrets. *See* Exhibit MM at 4-5, Appendix 1; *see also* Civil Dkt. 1225.

Third, equally well established is that victims, like Motorola, are entitled to recover reasonable attorneys’ fees necessary to responding to and cooperating with a government’s investigation. 18 U.S.C. § 3663A(b)(4) (emphasis added); *see also Lagos v. United States*, 584 U.S. 577, 582 (2018) (allowing restitution for “necessary” expenses). These “other expenses” may include fees paid by the corporate victim to outside counsel for work that was directly, foreseeably, and reasonably related to the defendant’s criminal acts. *See United States v. Yihao Pu*, 814 F.3d 818, 829 (7th Cir. 2016). In this case, Motorola’s counsel has reported incurring about \$2.183 million in responding to government subpoenas and requests, production and vendor fees,

preparing for interviews, and expenses in seeking restitution and employing experts. VIS at 31-33. As Motorola reported, Judge Norgle previously held the Motorola's counsels' rates were "reasonable" considering the case's volume and the expertise required to litigate it. VIS at 32 (citing Civil Dkt. 1250).

Thus, the court should issue a restitution order requiring Hytera immediately to pay Motorola: (1) \$174,400,446.00 in the value of the stolen trade secrets; (2) \$114,215,523.00 in prejudgment interest; and (3) \$2,183,383.30 in reasonable expenses.

B. The Complexity Exception Does Not Apply.

Contrary to the PSR (PSR ¶ 142), § 3663A(c)(3) does not save Hytera from having to compensate Motorola. Section 3663A(c)(3)(B) states that a restitution order is not mandatory when complexity would complicate or prolong the sentencing process "to a degree that the need to provide restitution to any victim is outweighed by the burden on the sentencing process." "The complexity exception requires a balancing test: To determine whether it applies, a court must weigh the need to provide restitution to a victim against the burden on the sentencing process posed by determining complex issues of fact." *United States v. Betts*, 99 F.4th 1048, 1061 (7th Cir. 2024); *see also, e.g., United States v. Malone*, 747 F.3d 481, 486 (7th Cir. 2014). Such balancing plainly tips in favor of requiring Hytera to make Motorola whole for Hytera's "large and blatant theft of trade secrets." *Motorola Sols*, 108 F.4th at 468.

There is an acute need to order Hytera to pay Motorola restitution, given the harm caused to Motorola and Hytera's history of avoiding compensating for it. Hytera stole Motorola's source code and thousands of confidential and proprietary records to

build a competing DMR, depriving Motorola of more than \$170 million in lost profits and enriching Hytera mightily. Given that damage, restitution is paramount to make Motorola whole. *See Malone*, 747 F.3d at 485 (“Congress intended the [Act] to ensure victims are compensated for the full amount of their losses caused by a defendant’s criminal conduct.”); *United States v. Day*, 418 F.3d 746, 758 (7th Cir. 2005) (“Congress, in adopting the MVRA, believed that the law should be concerned first with the victim’s right to full restitution and the defendant’s concomitant recognition of the duty to pay full restitution.”).

Nevertheless, and despite the civil judgment ordered years ago, Hytera has a history of failing to pay Motorola timely. For example, as Judge Pacold explained, after Hytera had failed to make royalty payments for more than a year:

To cover units sold between July 1, 2019 and June 30, 2022, Hytera was required to make its first royalty payment of approximately \$49 million into the escrow account on July 31, 2022.

Though Hytera was the progenitor and expositor of the royalty-order concept, it has not complied with the very order it sought. Hytera now claims that it has made reasonable and diligent efforts to comply with the royalty order and that in the alternative, it is unable to pay. Neither is true. Hytera’s supposed efforts to comply have been neither reasonable nor diligent. ***And Hytera can pay—it has simply chosen to prioritize its operations and other creditors over its obligation to Motorola and its obligation to obey the court’s order.*** Hytera’s failure to comply leaves the court with no choice but to hold Hytera in contempt.

...

In light of Hytera’s recalcitrance, fines, other monetary sanctions, and other options would be ineffective. To coerce compliance with the royalty order, the appropriate course is to enjoin Hytera from selling any products containing two-way

radio technology anywhere in the world until its obligations under the royalty order are satisfied.

Exhibit OO (Aug. 23, 2023 Order) (emphases added). Only under the threat of draconian restrictions did Hytera comply with the royalty order it requested. Civil Dkt. No. 1474. More recently, Judge Pacold issued restraining orders against Hytera regarding the sale of assets, done without court approval, to require it to place the proceeds in escrow for purposes of potential payment to Motorola. Civil Dkt. 1878; 1889.

To date, Hytera has paid only a part of the civil judgment, which includes \$470 million owed on the trade-secret damages alone.¹⁵ Given the immense harm to Motorola, and Hytera's history, there is a need for a criminal restitution order here, which would subject to Hytera to additional penalties should it continue to fail to compensate Motorola. Indeed, the parties negotiated a plea agreement which discounted the fine amount—by capping it well under Guidelines at \$60 million—but made plain the need for restitution and prioritized it by subjecting Hytera to potential revocation of the plea should it fail to meet its restitution (and fine) obligations. R. 353 ¶¶ 11, 33.

Moreover, estimating restitution is not particularly complex here. Hytera pleaded guilty to a conspiracy to steal at least one of Motorola's trade secrets (R. 353), and the record—in this sentencing proceeding and from the civil case—proves that

¹⁵ This includes the compensatory and punitive damages awarded under the civil trade-secret claims but does not include the copyright damages, *Motorola*, 108 F.4th at 498, and accounts for additional prejudgment interest, VIS at 14.

those secrets include Motorola’s DMR source code, among other stolen trade secret information. *See, e.g.*, Exhibit A (Dr. Wicker’s Report); R. 120 (listing of trade secrets stolen); *see also, e.g.*, *United States v. Hsu*, 155 F.3d 189, 204 (3d Cir. 1998) (“[P]roof that the defendants sought to steal actual trade secrets is not an element of the crimes of attempt or conspiracy under the EEA.”); *United States v. O’Rourke*, 417 F. Supp. 3d 996, 1003 (N.D. Ill. 2019) (similar). As Judge Norgle has already found, based on the same evidence and after a months-long trial, Hytera used those secrets to build and sell Hytera’s DMRs, which it could not have done otherwise. Civil Dkt. 1100 at 5-9; *see also, e.g.*, *Sawyer*, 825 F.3d at 295 (conspirators owe in restitution the harms caused by the conspiracy, even if not associated with a particular overt act). Judge Norgle, after hearing competing expert testimony, which is in the record here, concluded that Dr. Malackowski accurately calculating the losses to Motorola—the value of the stolen property—that resulted. Civil Dkt. 1100 at 4. There is nothing complex about this Court reviewing the same evidence and reaching the same conclusion. On balance, restitution should be ordered.

That Hytera owes Motorola on the civil judgment does not affect the need to accurately determine the restitution amount and order payment. “[T]he MVRA is clear that receipt of, or entitlement to receive, compensation from any source other than the defendant cannot be considered in determining the amount of restitution.” *Malone*, 747 F.3d 481, 488 (7th Cir. 2014) (citing 18 U.S.C. § 3664(f)(1)(B)); *see also id.* at 486 (“Courts have decided it is appropriate to place on the defendant the burden of proving that the loss amount should be reduced by compensation received by the

victim from the defendant.”). Thus, where, as here, determining the victim’s losses is not unduly complicated, “the existence of a separate civil proceeding that would address the same issues will not be relevant.” *Id.* at 487. As contemplated by the plea agreement (R. 353 ¶ 15), Hytera will not risk overpayment under § 3664(j), and given the egregiousness of its misconduct and its failure to make Motorola whole, the Court should award full restitution.

VI. CONDITIONS OF PROBATION

The government agrees with the mandatory and standard conditions of probation identified in the PSR. PSR ¶ 128; *see also* U.S.S.G. § 8D1.3(a) (“any sentence of probation shall include the condition that the organization not commit another federal, state, or local crime during the term of probation”). The government also agrees with the Special Condition of Probation recommended in the PSR: that Hytera provide the probation officer with access to requested financial information necessary to monitor compliance with other conditions of probation. *Id.*

The Guidelines also set forth recommended conditions of probation for organizations. U.S.S.G. § 8D1.4.¹⁶ Courts may impose any conditions that are “reasonably related to the nature and circumstances of the offense or the history and characteristics of the organization” so long as they “involve only such deprivations of liberty or property as are necessary to effect the purposes of sentencing.” U.S.S.G. § 8D1.3(c). For the reasons outlined above related to the seriousness of the offense and

¹⁶ The PSR does not address this Guidelines section and make no findings related to these conditions.

Hytera's characteristics, including its obstructive conduct and long delays in paying the civil judgment, the government requests that the following recommended conditions be imposed, with certain modifications:

1. Hytera shall maintain an effective compliance and ethics program consistent with §8B2.1 (Effective Compliance and Ethics Program). Hytera shall provide the Probation officer with a report detailing the nature and status of its compliance program as requested by the Probation officer, but no less than annually for the duration of its probationary term. *See* § 8D1.4(b)(1) (modified). This report shall disclose any criminal prosecution, civil litigation, or administrative proceeding commenced against the organization, or any investigation or formal inquiry by governmental authorities of which the organization learned since its last report. U.S.S.G. § 8D1.4(b)(3).
2. At its expense, Hytera shall publicize the nature of the offense committed, the fact of conviction, the nature of the punishment imposed, and the steps that will be taken to prevent the recurrence of similar offenses. U.S.S.G. § 8D1.4(b)(2). More specifically, Hytera shall publish to its corporate external facing websites, including but not limited to those available in the United States the following language, for at least a year or until all restitution is paid, whichever is later. This language should be included in any press releases or statements to the press concerning the sentencing proceedings and should include a list of conditions of probation imposed by this Court:

As Ordered by a Federal District Court in the United States, Hytera informs the public that it, as a company, has been found guilty by a court of conspiring to steal at least one trade secret from Motorola in violation of Title 18 United States Code, Section 1832(a)(5). The Court has ordered that Hytera notify the public, including distributors and investors by publishing this notice that it has pleaded guilty of the crime, and the Court has found it guilty and imposed a sentence that requires it to pay restitution to Motorola and places Hytera on Probation for a term of five years. During the term of Probation, Hytera is subject to [the conditions imposed at sentencing].

3. On at least an annual basis, or otherwise as requested by the Court or probation officer, Hytera shall make submissions to the court and probation officer, reporting any material adverse change in its business

or financial condition or prospects; the commencement of any bankruptcy proceeding; and Hytera shall not sell, divest, or otherwise transfer any business, real estate, subsidiary, affiliate, or material asset without express permission of the Court. U.S.S.G. § 8D1.4(b)(3) and (4).

4. Hytera shall make periodic payments, as specified by the court, in the following priority: (A) restitution; (B) fine; and (C) any other monetary sanction. U.S.S.G. § 8D104(b)(6).

Finally, Motorola requests that the court require Hytera to both quarantine all Motorola Trade Secret information and enjoin Hytera from making, selling or distributing DMR products that were adjudicated in the Civil trial. VIS at 35-37. The government agrees that Hytera should not retain Motorola's trade secret information and should not continue to manufacture, sell, or distribute products developed with or containing stolen trade secret information. The record demonstrates that Hytera has benefitted handsomely from its theft and has relentlessly avoided compliance with orders in the civil case, including failures to make timely payments. This history, along with the seriousness of the offense conduct, amply supports the requirements Motorola requests.

Here, however, the government also acknowledges the complexity involved in enforcing such conditions and that many of these issues have been resolved, or will be resolved, in the civil case. For example, following the Seventh Circuit's remand, Motorola's request for a permanent injunction is pending before Judge Pacold. *See, e.g.*, Civil Dkt. 1805, 1807, 1823, 1841, 1954. Accordingly, based on information presently available, the government requests that, at a minimum, Hytera be ordered to comply with all existing and future orders in the civil case, including any injunctions and judgments. Should Hytera fail to comply with this condition, the

court may impose more restrictive conditions of probation, including by imposing an injunction, requiring that Hytera retain an outside vendor to remove all Motorola information from its systems, or revoke probation and resentence the organization.

See U.S.S.G. § 8F1.1.

VII. CONCLUSION

For these reasons, the Court should sentence Hytera to a fine of \$60 million, order restitution in the amount of \$290,799,352.30, and impose the conditions set forth above.

Respectfully submitted,

ANDREW S. BOUTROS
United States Attorney

By: /s/ Melody Wells
MELODY WELLS
THOMAS P. PEABODY
WESLEY A. MORRISSETTE
Assistants U.S. Attorneys
219 South Dearborn Street, Fifth Floor
Chicago, Illinois 60604
(312) 353-5300